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PCT/EP2003/011235

PATENT COOPERATION TREATY



PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference B02/0625PC	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP2003/011235	International filing date (day/month/year) 10 October 2003 (10.10.2003)	Priority date (day/month/year) 11 October 2002 (11.10.2002)
International Patent Classification (IPC) or national classification and IPC C08F 8/00		
Applicant BASF AKTIENGESELLSCHAFT		

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of <u>3</u> sheets.</p>	
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input checked="" type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>	

Date of submission of the demand 10 May 2004 (10.05.2004)	Date of completion of this report 24 January 2005 (24.01.2005)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

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I. Basis of the report

1. This report has been drawn on the basis of *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.)*:

- ☐ the international application as originally filed.
- ☒ the description, pages 1-44, as originally filed,
 pages _____, filed with the demand,
 pages _____, filed with the letter of _____,
 pages _____, filed with the letter of _____.
- ☒ the claims, Nos. _____, as originally filed,
 Nos. _____, as amended under Article 19,
 Nos. _____, filed with the demand,
 Nos. 1-12, filed with the letter of 13 January 2005 (13.01.2005),
 Nos. _____, filed with the letter of _____.
- ☐ the drawings, sheets/fig _____, as originally filed,
 sheets/fig _____, filed with the demand,
 sheets/fig _____, filed with the letter of _____,
 sheets/fig _____, filed with the letter of _____.

2. The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

4. Additional observations, if necessary:

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IV. Lack of unity of invention

1. In response to the invitation to restrict or pay additional fees the applicant has:

- ☐ restricted the claims.
- ☐ paid additional fees.
- ☐ paid additional fees under protest.
- ☐ neither restricted nor paid additional fees.

2. ☒ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

- ☐ complied with.
- ☒ not complied with for the following reasons:

4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:

- ☒ all parts.
- ☐ the parts relating to claims Nos. _____

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Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Box IV.3

1. The claims include four independent process claims (claims 5, 7, 8 and 9), but of these only claim 5 relates to the production of the polymer compositions according to claims 1 to 3. Claims 7 and 8 describe the production of other products, namely fibres, films and shaped bodies. The process according to claim 8 does not appear to use the claimed polymer composition at all. The product obtained is a laminate consisting of a hydrophobic main body and a coating of modified polyisobutene. Claim 9 relates to a process for colouring a polymer composition and has nothing to do with the rest of the teaching. The various processes relate to the production of different products and therefore solve different problems.
2. Claim 12 claims only the use of a single component rather than the use of the compositions according to claim 1. The potential use of the polymer composition itself and the use of a component of that composition are solutions to different problems and clearly have nothing to do with each other.

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V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-11	YES
	Claims	12	NO
Inventive step (IS)	Claims	1-11	YES
	Claims	12	NO
Industrial applicability (IA)	Claims	1-12	YES
	Claims		NO

2. Citations and explanations

1. Claim 9

It is not clear how a "hydrophobic polymer" can be measurably and reliably distinguished from a hydrophilic polymer (PCT Article 6). For the purposes of the present report the term is taken to refer to any polymer that is not completely water-soluble.

2. The term "polar group" in claim 1 is very broad. For the purposes of the present report it is taken to refer to all groups whose polarity is higher than that of the C-H bonds in polyisobutene (PCT Article 6).

3. Judging from process claim 5, the claimed "polymer compositions" also include copolymers and block copolymers produced when "the monomers used to produce the hydrophobic polymer are brought into contact with a polyisobutene molecule modified with terminal polar groups (component B)". It would be misleading to refer to these as "polymer compositions" (PCT Article 6).

4. The independent claims relating to coloured compositions and the production and use thereof (claims 9 to 11) actually relate to preferred embodiments of the subject matter of claims 1, 4 and 5 (PCT Rule 6.4).

5. The very general term "shaped body" (claims 4, 7 and 8)

covers polymers in any form, including (for example) pellets produced by a pelletiser during the processing of polymer compositions.

6. The subject matter of claims 1 to 8 is novel and involves an inventive step (PCT Article 33(2) and (3)). Polymer compositions as defined in claim 1 are neither mentioned in nor suggested by any of the documents cited in the search report.

7. Claims 9 to 11 are novel and involve an inventive step (PCT Article 33(2) and (3)). The claimed coloured polymer compositions are neither mentioned in nor suggested by any of the documents cited in the search report.

8. Claim 12 lacks novelty (PCT Article 33(2)) in relation to the following prior art documents:

D1: Kennedy, J.P.: "New telechelic elastomers", Applied Polymer Symposia, Vol. 39, 1982, pages 21-35; see in particular the "Synopsis" and the reaction diagrams, for example on pages 29, 30, 32 and 33, which also mention "hydrophobic polymers". The molecular weights are within the range claimed in the present application (see, for example, the middle of page 23, the paragraph on page 25, and the penultimate paragraph on page 31.)

D2: DE-A-4 319 672 (see the claims)

9. The invention is industrially applicable (PCT Article 33(4)).